

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double brackets indicating deletions.

Listing of the Claims

1. (Previously Presented) A high frequency power supplying device, having two or more loads which are capacitive or inductive, said high frequency power supplying device comprising:

high frequency power sources for supplying power to the loads, each of the high frequency power sources being provided in proximity to a corresponding load.

2. (Original) The high frequency power supplying device as set forth in claim 1, wherein

the high frequency power source has a high frequency power amplifier provided in proximity to a corresponding load.

3. (Original) The high frequency power supplying device as set forth in claim 1, wherein

a frequency modulation control section for controlling frequencies of high frequency currents supplied to the loads is provided so as to cause the high frequency power sources respectively provided on the loads to independently and simultaneously supply the high frequency currents, identical with each other or different from each other in terms of a frequency, to the two or more loads, and so as to match impedances of the

loads by performing frequency modulation with respect to the high frequency currents supplied to the loads.

4. (Original) The high frequency power supplying device as set forth in claim 1, wherein

a phase modulation control section for controlling phases of high frequency currents supplied to the loads is provided so as to cause the high frequency power sources respectively provided on the loads to independently and simultaneously supply the high frequency currents, identical with each other or different from each other in terms of a phase, to the two or more loads.

5. (Original) The high frequency power supplying device as set forth in claim 1, wherein

a power control section for controlling high frequency power supplied to the loads is provided so as to cause the high frequency power sources respectively provided on the loads to independently and simultaneously supply one or more kinds of the high frequency power to the two or more loads.

6. (Previously Presented) A plasma generation device, comprising: the high frequency power supplying device as set forth in claim 1; and a vacuum chamber on which the loads are provided, wherein the high frequency power is applied to the loads so as to generate a plasma.

7. (Original) The plasma generation device as set forth in claim 6, comprising a measuring section for measuring (i) a high frequency current, (ii) a high frequency voltage, both of which are supplied to each of the loads, (iii) a phase of the high frequency current, and (iv) a plasma generation condition in a vicinity of the load.

8. (Original) The plasma generation device as set forth in claim 6, comprising: a negative feedback circuit for generating a control signal from a signal of the high frequency current flowing in the load; and a control system for self-oscillating based on the control signal so as to supply the high frequency power.

9. (Original) The plasma generation device as set forth in claim 6, comprising a plasma control section for independently setting phases and frequencies of high frequency currents supplied to two or more loads adjacent to each other, so as to control an effective acceleration potential of an electron in the plasma, the effective acceleration potential being caused by a high frequency electric field generated in the loads adjacent to each other.

10. (Currently Amended) The plasma generation device as set forth in claim 6, comprising:

a control system for sequentially feedbacking measured values indicative of (i) a high frequency current of the high frequency power, (ii) a high frequency voltage of the high frequency power, (iii) a phase of the high frequency current, and (iv) a plasma condition (plasma density for example) in a vicinity of the load, and for independently and positively controlling the two or more loads in accordance with any one of phase

modulation, frequency modulation, and amplitude modulation, so as to control impedance matching performed with respect to the load and so as to control uniformity and reproducibility of the plasma in the vacuum chamber; and
a monitor showing the plasma condition.

11.-14. (Cancelled)

15. (Original) The plasma generation device as set forth in claim 6, comprising a sensor provided in the vacuum chamber so as to measure an intensity of a high frequency inductive magnetic field irradiated from the load.

16.-21. (Cancelled)

22. (Original) The plasma generation device as set forth in claim 6, comprising a power source control section for controlling high frequency power sources so that spatial distribution patterns of plasmas each of which has been generated on the basis of pulsed high frequency power supplied to each load are different from each other.

23. (Original) The plasma generation device as set forth in claim 22, wherein the power source control section periodically changes each of the spatial distribution patterns of the plasmas.

24. (Original) The plasma generation device as set forth in claim 22, wherein the power source control section independently changes each of the spatial distribution patterns of the plasmas.

25. (Original) The plasma generation device as set forth in claim 22, wherein:

the loads are divided into groups adjacent to each other, and

the power source control section causes the groups adjacent to each other to deviate from each other in terms of pulse operation.

26. (Original) The plasma generation device as set forth in claim 25, wherein the power source control section causes the groups adjacent to each other to exclusively deviate from each other in terms of pulse ON/OFF operation.

27. (Original) The plasma generation device as set forth in claim 22, comprising a sensor provided in the vacuum chamber so as to measure an intensity of a high frequency inductive magnetic field irradiated from the load.

28. (Previously Presented) A plasma generation device, comprising: the high frequency power supplying device as set forth in claim 2; and a vacuum chamber on which the loads are provided, wherein the high frequency power is applied to the loads so as to generate a plasma.

29. (Previously Presented) A plasma generation device, comprising: the high frequency power supplying device as set forth in claim 3; and a vacuum chamber on which the loads are provided, wherein the high frequency power is applied to the loads so as to generate a plasma.

30. (Previously Presented) A plasma generation device, comprising: the high frequency power supplying device as set forth in claim 4; and a vacuum chamber on which the loads are provided, wherein the high frequency power is applied to the loads so as to generate a plasma.

31. (Previously Presented) A plasma generation device, comprising: the high frequency power supplying device as set forth in claim 5; and a vacuum chamber on which the loads are provided, wherein the high frequency power is applied to the loads so as to generate a plasma.

32. (New) The high frequency power supplying device as set forth in claim 1, wherein the proximity is such that a wiring length of the high frequency power source is set so as to avoid formation of a standing wave in each of the loads.

33. (New) The high frequency power supplying device as set forth in claim 1, wherein a wiring length of each of the high frequency power sources is less than $\frac{1}{4}$ with respect to a wavelength of the high frequency.

34. (New) The high frequency power supplying device as set forth in claim 1, wherein the loads are antennas.

35. (New) The high frequency power supplying device as set forth in claim 34, wherein the antennas are independently driven and controlled such that a standing wave is avoided.

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END OF CLAIM LISTING

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